

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 2, and 23 as follows:

1. (TWICE AMENDED) An optical disc apparatus comprising:
a converging section for converging a light beam and irradiating a rotating information medium with the converged light beam;
a moving section for moving the converging section, thereby moving a converging point of the converged light beam in a direction perpendicular to an information surface of the information medium;
a converging state detection section for generating a focus servo signal which represents a converging state of the light beam on the information medium based on reflected light or transmitted light of the light beam from the information medium;
a focus servo control section for controlling the moving section based on the focus servo signal, so that the light beam reaches a predetermined converging state on the information medium; and
a focus pull-in section for turning ON [the control by] the focus servo control section; and
an interval measuring section for measuring an interval between temporally adjoining two of the focus servo signals appearing in sequence,
wherein the focus pull-in section turns ON [the control by] the focus servo control section when detected that the interval between adjoining two of the focus servo signals exceeds a predetermined period of time [in a case where the focus pull-in section determines that the converging point of the light beam is located in the vicinity of the position where the velocity of the information medium axial deviation is minimum].

2. (TWICE AMENDED) An optical disc apparatus according to claim 1, further comprising an S-shape signal detection section for detecting S-shape signals which appear in the focus servo signal when the converging point of the light beam contacts with the information surface of the information medium,

wherein the focus pull-in section determines whether or not the converging point of the light beam is located in the vicinity of the position where the velocity of the information medium axial deviation is minimum.

23. (AMENDED) A digital signal processor for controlling the focus servo of an optical disk apparatus,

the optical disk apparatus including:

a converging section for converging a light beam and irradiating a rotating information medium with the converged light beam;

a moving section for converging a light beam and irradiating a rotating information medium with the converged light beam; and

a converging state detection section for generating a focus servo signal which represents a converging state of the light beam on the information medium based on reflected light or transmitted light of the light beam from the information medium,

the digital signal processor having an input coupled to the focus servo signal comprising:

a focus servo control section for controlling the converging section based on the focus servo signal, so that the light beam reaches a predetermined converging state on the information medium; and

an interval measuring section for measuring an interval between temporally adjoining two of the focus servo signals,

a focus pull-in section for turning ON [the control by] the focus servo control section when detected that the interval between adjoining two of the focus servo signals exceeds a predetermined period of time [in a case where the focus pull-in section determines that the converging point of the light beam is located in the vicinity of the position where the velocity of the information medium axial deviation is minimum].